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PATENT  
930039-2039



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**  
**BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**  
**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant(s) : Robert A. Hansen  
Serial No. : 09/679,697  
For : METHOD FOR PRODUCING SPIRAL WOUND PAPER  
MACHINE CLOTHING  
Filed : October 5, 2000  
Examiner : Karen M. Hastings  
Art Unit : 1731

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New York, NY 10151

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Ronald R. Santucci  
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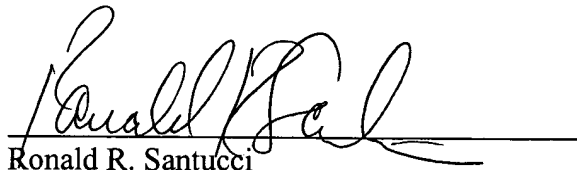
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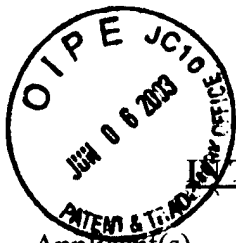
Sir:

Transmitted herewith in triplicate is the Appeal Brief in the above referenced patent application, with respect to the Notice of Appeal filed on April 9, 2003. The filing fee of \$320 is enclosed.

Respectfully submitted,

FROMMER LAWRENCE & HAUG LLP

By:   
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PATENT  
930039-2039

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**BRIEF OF APPELLANT**

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P.O. Box 1450  
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Dear Sir:

This is an appeal from the decision of the Final Office Action dated December 4, 2002, in which claims 1 and 7-32 were rejected. This Brief is accompanied by the requisite fee

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set forth in 37 C.F.R. §1.17(f). This brief is submitted in triplicate as required by 37 C.F.R. §1.192(a).

### **REAL PARTY IN INTEREST**

The real party in interest is Albany International Corp., to which appellant has assigned all interest in, to and under this application, by virtue of an assignment recorded on October 5, 2000, at reel 011251, frame 0654, of the assignment records of the Patent and Trademark Office.

### **RELATED APPEAL AND INTERFERENCE**

Upon information and belief, there are no other appeals or interferences which will directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

### **STATUS OF CLAIMS**

Claims 1 and 7-32 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which appellant regards as the invention.

Claims 1 and 7-32 were rejected under 35 U.S.C. §103(a) as being unpatentable over Baker et al. (EP 0802280) as necessary with Rexfelt et al. (US Patent No. 5,360,656) and/or Best et al. (US Patent No. 5,268,076).

The rejected claims 1 and 7-32 are set out in the Appendix attached hereto.

The rejected claims are being appealed.

### **STATUS OF THE AMENDMENTS**

A Final Office Action issued on December 4, 2002. A Notice of Appeal, without an Amendment, was filed in response to the Final Action.

### **SUMMARY OF THE INVENTION**

Appellant's invention is directed toward a papermaker's fabric and a method for making such a fabric. The fabric is formed from a laminated structure (see e.g. application Fig. 4) having a top layer (see e.g. Fig. 4, element 34) and a bottom layer (see e.g. Fig. 4, element 36), the two layers being offset from one another such that an unlaminated portion of the top layer runs along a lateral edge of the structure (see e.g. Fig. 4, element 30) and an unlaminated portion of the bottom layer runs along the other lateral edge of the structure (see e.g. Fig. 4, element 32). The laminated structure is spirally wound in a multiple of turns (see e.g. Fig. 1) so that the unlaminated portion of the top layer in one turn overlies the unlaminated portion of the bottom layer in an adjacent turn (see e.g. Fig. 3). The overlying unlaminated portion of the top layer is joined to the unlaminated portion of the bottom layer to form a papermaker's fabric in the form of an endless loop. The resulting papermaker's fabric has "a sandwich structure," and the "the surface of said top layer and the surface of said bottom layer that form the inner surfaces of said sandwich are substantially smooth."

### **ISSUES**

Whether or not claims 1 and 7-32 are indefinite under 35 U.S.C. §112, second paragraph, for failing to particularly point out and distinctly claim the subject matter which appellant regards as the invention.

Whether or not claims 1 and 7-32 are unpatentable under 35 U.S.C. §103(a) as being obvious over Baker et al. (EP 0802280) as necessary with Rexfelt et al. (US Patent No. 5,360,656) and/or Best et al. (US Patent No. 5,268,076).

### **GROUPING OF CLAIMS**

It is appellant's intention that claims 1 and 7-42 be grouped together so that they stand or fall together.

### **ARGUMENT**

**Whether or not claims 1 and 7-32 are indefinite under 35 U.S.C. §112, second paragraph, for failing to particularly point out and distinctly claim the subject matter which appellant regards as the invention.**

Appellant submits that claims 1 and 7-32 are in compliance with §112, and more particularly, that appellant's use of the phrase "substantially smooth" in claims 1 and 22 is permissible and definite.

The Court of Appeals for the Federal Circuit has held that using the term "substantially" in a patent claim does not of itself render the claim indefinite. That is, apart from other considerations, the use of the term "substantially" is not a violation of §112, second paragraph. In *Verve LLC v. Crane Cams Inc.*, 311 F.3d 1116; 65 U.S.P.Q.2d 1051 (Fed. Cir. 2002), the Federal Circuit vacated a district court finding that the claim language "substantially constant wall thickness" in the claims was not supported in the specification and prosecution history by a sufficiently clear definition of "substantially." In reaching its decision the Court explained that

Expressions such as "substantially" are used in patent documents when warranted by the nature of the invention, in order to accommodate the minor variations that may be appropriate to secure the invention. Such usage may well satisfy the charge to "particularly point out and distinctly claim" the invention, 35

U.S.C. § 112, and indeed may be necessary in order to provide the inventor with the benefit of his invention. In *Andrew Corp. v. Gabriel Elecs. Inc.*, 847 F.2d 819, 821-22, 6 USPQ2d 2010, 2013 (Fed. Cir. 1988) the court explained that usages such as "substantially equal" and "closely approximate" may serve to describe the invention with precision appropriate to the technology and without intruding on the prior art. The court again explained in *Ecolab Inc. v. Envirochem, Inc.*, 264 F.3d 1358, 1367, 60 USPQ2d 1173, 1179 (Fed. Cir. 2001) that "like the term 'about,' the term 'substantially' is a descriptive term commonly used in patent claims to 'avoid a strict numerical boundary to the specified parameter,'" quoting *Pall Corp. v. Micron Separations, Inc.*, 66 F.3d 1211, 1217, 36 USPQ2d 1225, 1229 (Fed. Cir. 1995).

It is well established that when the term "substantially" serves reasonably to describe the subject matter so that its scope would be understood by persons in the field of the invention, and to distinguish the claimed subject matter from the prior art, it is not indefinite. Understanding of this scope may be derived from extrinsic evidence without rendering the claim invalid. The summary judgment record offered no basis for departing from these general rules. Thus the usage "substantially constant wall thickness" does not of itself render the claims of the '315 patent indefinite.

*Verve*, 65 U.S.P.Q.2d at 1054.

In the present case, use of the phrase "substantially smooth" is necessary in order to provide the inventor with the benefit of his invention. It describes the invention with precision appropriate to the technology and without intruding on the prior art. In particular, by using the phrase "substantially smooth" to describe the inner surfaces of the invention's sandwich structure, appellant has distinguished his invention over the Baker reference, which includes inner surfaces having unsmooth jointing structures (see e.g. Baker column 3, lines 5-16; and Fig. 3), and has done so in a manner that is clearly understandable to those skilled in the art.

**Whether or not claims 1 and 7-32 are unpatentable under 35 U.S.C. §103(a) as being obvious over Baker et al. (EP 0802280) as necessary with Rexfelt et al. (US Patent No. 5,360,656) and/or Best et al. (US Patent No. 5,268,076).**

Appellant submits that the independent claims (claims 1 and 22) are patentable over Baker, Rexfelt and Best.

Appellant's invention as recited in the independent claims is directed toward a papermaker's fabric and a method for making such a fabric. Each of the claims recites that the fabric is formed from a laminated structure having a top layer and a bottom layer, that "the resulting papermaker's fabric has a sandwich structure," and that "the surface of said top layer and the surface of said bottom layer that form the inner surfaces of said sandwich are substantially smooth."

Neither Baker, Rexfelt nor Best discloses a papermaker's fabric having a sandwich structure wherein the inner surfaces of the sandwich layers are substantially smooth. In particular, appellant wishes to comment on the Baker reference.

Baker discloses an industrial fabric having segments with integral jointing structures. The jointing structures engage with, and interlock with, each other to provide secure mating engagement of the segments making up the fabric (see e.g. Baker column 3, lines 5-16). It should be noted that, although Baker's column 7, lines 10-35 mentions that the plies of each segment can be interconnected by "tie-strands," the coupling of the segments to each other is still achieved by way of interlocking jointing structures (e.g. slots and ribs).

The jointing structures of Baker give the joining surfaces of Baker's segments an unsmooth profile, thereby teaching away from appellant's invention. Indeed, Baker discusses drawbacks associated with the joining of prior art smooth-surface segments (see e.g. column 2, line 14 to column 3, line 3), and how the interlocking of unsmooth surfaces can be used overcome those drawbacks (see e.g. column 2, lines 26-35). Thus, Baker does not teach or



suggest a sandwich structure wherein the inner surfaces of the sandwich layers are substantially smooth.

Moreover, even if Baker could be construed as suggesting a sandwich structure wherein the inner surfaces of the sandwich layers are substantially smooth, it could not be construed to contain enabling disclosure for forming such a structure. The interlocking structures of Baker must be properly aligned in order to be effective. For example, the ribs and slots on a first surface must be aligned with the ribs and slots on a mating surface, otherwise the surfaces will not interlock. By contrast the substantially smooth surfaces of appellant's invention are not attached by interlocking, but rather, by sewing, stitching, welding, needling, fusing and/or gluing; and therefore appellant's surfaces do not need to be mechanically aligned, allowing for some shift in the relative positions of the layers during construction. Baker is limited to mechanical alignment because it incorporates an interlocking structure that only interlocks when properly aligned, and thus Baker can not possibly be construed as disclosing an alignment independent structure.

Regarding the rejections under §103, it is well-settled that there must be some prior art teaching which would have provided the necessary incentive or motivation for modifying the reference teachings. *In re Laskowski*, 12 U.S.P.Q. 2d 1397, 1399 (Fed. Cir. 1989); *In re Obukowitz*, 27 U.S.P.Q. 2d 1063 (B.P.A.I. 1993). Further, "obvious to try" is not the standard under 35 U.S.C. §103. *In re Fine*, 5 U.S.P.Q. 2d 1596, 1599 (Fed. Cir. 1988). And as stated by the Court in *In re Fritch*, 23 U.S.P.Q. 2d 1780, 1783-1784 (Fed. Cir. 1992): "The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggests the desirability of the modification." Also, the Examiner is respectfully reminded that for the Section 103 rejection to be proper, both the

suggestion of the claimed invention and the expectation of success must be founded in the prior art, and not appellant's disclosure. *In re Dow*, 5 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1988).

In the present case, Baker does not provide the necessary incentive or motivation for modifying its interlocking structure to form a smooth-surfaced structure as recited by appellant. Indeed, Baker teaches away from such modification by requiring mechanical alignment of its interlocking joints. Again, the Federal Circuit in *In re Fine* was very clear that "obvious to try" is not the standard upon which an obviousness rejection should be based. And as "obvious to try" would be the only standard that would lend the instant rejection any credibility, the rejection must fail as a matter of law.

Furthermore, appellant emphasizes that the only expectation of success is found in appellant's specification. The Baker disclosure stands in stark contrast. Not only does Baker fail to mention any possibility of success with a smooth-surfaced structure, it is predicated on solving the problems associated with such structures (see e.g. Baker column 2, line 14 to column 3, line 3).

In sum, since neither Baker, Rexfelt nor Best discloses a papermaker's fabric having a sandwich structure wherein the inner surfaces of the sandwich layers are substantially smooth, appellant believes that claims 1 and 22 are patentable over Baker, Rexfelt and Best - taken either alone or in combination - on at least this basis. Further, since dependent claims inherit the limitations of the claims from which they depend, claims 7-21 are believed to be patentable over the cited references at least on the basis of their dependency on claim 1, and claims 23-32 are believed to be patentable over the cited references at least on the basis of their dependency on claim 22.

**CONCLUSION**

Claims 1 and 7-32 are not indefinite and are not obvious in view of the applied combination of Baker, Rexfelt and Best. Accordingly, it is respectfully submitted that the Examiner erred in rejecting claims 1 and 7-32 and a reversal of such rejections by this Honorable Board is solicited.

Respectfully submitted,  
FROMMER LAWRENCE & HAUG LLP

By:



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**APPENDIX**

1. A method for manufacturing a papermaker's fabric, said method comprising the steps of:

providing a laminated structure, said laminated structure having a bottom layer and a top layer, said bottom layer and said top layer each being strips of equivalent width and being laminated together, said bottom layer being transversely offset with respect to said top layer so that an unlaminated portion of said bottom layer is along one lateral edge of said laminated structure and an unlaminated portion of said top layer is along the other lateral edge of said laminated structure;

spirally winding said laminated structure in a plurality of turns wherein said unlaminated portion of said top layer in one turn of said laminated structure overlies said unlaminated portion of said bottom layer in an adjacent turn of said laminated structure; and

joining said overlying unlaminated portion of said top layer to said unlaminated portion of said bottom layer to form said papermaker's fabric, said joining including one or more operations selected from the group consisting of sewing, stitching, welding, needling, fusing and gluing said overlying unlaminated portion with said top layer to said unlaminated portion of said bottom layer, and said papermaker's fabric being in the form of an endless loop having an inner surface and an outer surface;

wherein the resulting papermaker's fabric has a sandwich structure, and wherein the surface of said top layer and the surface of said bottom layer that form the inner surfaces of said sandwich are substantially smooth.

7. A method as claimed in claim 1 wherein said step of providing a laminated structure comprises the steps of:

providing the bottom layer, said bottom layer being a base for said laminated structure;

providing the top layer, said top layer being adapted to support a paper web in a paper machine;

forming a sandwich of said top and bottom layers, said bottom layer being transversely offset with respect to said top layer; and

attaching said top and bottom layers together to form said laminated structure.

8. A method as claimed in claim 7 wherein said step of attaching is performed by sewing.
9. A method as claimed in claim 7 wherein said step of attaching is performed by needling.
10. A method as claimed in claim 7 wherein said step of attaching is performed by gluing.
11. A method as claimed in claim 7 wherein said step of attaching is performed by fusing.
12. A method as claimed in claim 7 wherein said step of attaching is performed by melting.
13. A method as claimed in claim 1 further comprising the step of attaching at least one additional layer of staple fiber material to said papermaker's fabric.
14. A method as claimed in claim 13 wherein said attaching step is carried out on said inner surface of said papermaker's fabric.

15. A method as claimed in claim 13 wherein said attaching step is carried out on said outer surface of said papermaker's fabric.

16. A method as claimed in claim 13 wherein said at least one additional layer of staple fiber material is in the form of a strip spiralled onto one of said inner and outer surfaces of said papermaker's fabric.

17. A method as claimed in claim 13 wherein said at least one additional layer of staple fiber material is applied full-width onto one of said inner and outer surfaces of said papermaker's fabric.

18. A method as claimed in claim 1 further comprising the step of providing a base fabric for said papermaker's fabric, said base fabric being in the form of an endless loop, said endless loop having an inner surface, an outer surface, a first and a second lateral edge, and a fabric width measured transversely between said lateral edges, wherein said laminated structure is spirally wound in a plurality of turns upon said outer surface of said base fabric.

19. A method as claimed in claim 1 further comprising the steps of:

providing a base fabric for said papermaker's fabric, said base fabric being in the form of an endless loop, said endless loop having an inner surface, an outer surface, a first and a second lateral edge, and a fabric width measured transversely between said lateral edges; and

slipping said base fabric inside said papermaker's fabric.

20. A method as claimed in claim 1, wherein said laminated structure is a first laminated structure, further comprising the steps of:

providing a second laminated structure, said second laminated structure also having a bottom layer and a top layer, said bottom layer and said top layer each being strips of equivalent width and being laminated together, said bottom layer being transversely offset with respect to said top layer so that an unlaminated portion of said bottom layer is along one lateral edge of said second laminated structure and an unlaminated portion of said top layer is along the other lateral edge of said second laminated structure;

spirally winding said second laminated structure in a plurality of turns upon said papermaker's fabric, wherein said unlaminated portion of said top layer in one turn of said second laminated structure overlies said unlaminated portion of said bottom layer in an adjacent turn of said second laminated structure; and

joining said overlying unlaminated portion of said top layer to said unlaminated portion of said bottom layer.

21. A method as claimed in claim 20 wherein said second laminated structure is spirally wound in a direction opposite to that in which said first laminated structure is wound.

22. A papermaker's fabric for a paper machine, said papermaker's fabric comprising:

a laminated structure, said laminated structure having a bottom layer and a top layer, said bottom layer and said top layer each being strips of equivalent width and being laminated together, said bottom layer being transversely offset with respect to said top layer, so

that an unlaminated portion of said bottom layer is along one lateral edge of said laminated structure and an unlaminated portion of said top layer is along the other lateral edge of said laminated structure; said laminated structure being spirally wound in a plurality of turns wherein said unlaminated portion of said top layer in one turn of said laminated structure overlies said unlaminated portion of said bottom layer in an adjacent turn of said laminated structure; said overlying unlaminated portion of said top layer being joined to said unlaminated portion of said bottom layer by performing one or more operations selected from the group consisting of sewing, stitching, welding, needling, fusing and gluing said overlying unlaminated portion of said top layer with said unlaminated portion of said bottom layer;

wherein the resulting papermaker's fabric has a sandwich structure, and wherein the surface of said top layer and the surface of said bottom layer that form the inner surfaces of said sandwich are substantially smooth.

23. A papermaker's fabric as claimed in claim 22 further comprising at least one additional layer of staple fiber material attached to one of the inner and outer surfaces of said papermaker's fabric.

24. A papermaker's fabric as claimed in claim 23 wherein said at least one additional layer of staple fiber material is in the form of a strip spiralled onto one of said inner and outer surfaces of said papermaker's fabric.



25. A papermaker's fabric as claimed in claim 23 wherein said at least one additional layer of staple fiber material is applied full-width onto one of said inner and outer surfaces of said papermaker's fabric.
26. A papermaker's fabric as claimed in claim 22 further comprising a base fabric in the form of an endless loop, said endless loop having an inner surface and an outer surface, wherein said laminated structure is spirally wound upon said outer surface of said base fabric.
27. A papermaker's fabric as claimed in claim 22 further comprising a base fabric in the form of an endless loop, said endless loop having an inner surface and an outer surface, wherein said base fabric is inside said papermaker's fabric.
28. A papermaker's fabric as claimed in claim 22 wherein said laminated structure is a first laminated structure and further comprising a second laminated structure, said second laminated structure also having a bottom layer and a top layer, said bottom layer and said top layer each being strips of equivalent width and being laminated together, said bottom layer being transversely offset with respect to said top layer, so that an unlaminated portion of said bottom layer is along one lateral edge of said second laminated structure and an unlaminated portion of said top layer is along the other lateral edge of said second laminated structure; said second laminated structure being spirally wound in a plurality of turns upon said papermaker's fabric wherein said unlaminated portion of said top layer in one turn of said second laminated structure overlies said unlaminated portion of said bottom layer in an adjacent turn of said second

laminated structure; said overlaying unlaminated portion of said top layer being joined to said unlaminated portion of said bottom layer.

29. A papermaker's fabric as claimed in claim 22 wherein said top layer of said laminated structure comprises one of the materials selected from the group consisting of: staple fiber material; fabric woven from fibers or filaments; spun-bond, hydroentangled and melt-blown nonwoven fabrics; and apertured extruded polymeric films.

30. A papermaker's fabric as claimed in claim 22 wherein said top layer of said laminated structure comprises at least two distinct sublayers, each of said sublayers comprising one of the materials selected from the group consisting of: staple fiber material; fabric woven from fibers or filaments; spun-bond, hydroentangled and melt-blown nonwoven fabrics; and apertured extruded polymeric films.

31. A papermaker's fabric as claimed in claim 22 wherein said bottom layer of said laminated structure comprises one of the materials selected from the group consisting of: staple fiber material; fabric woven from fibers or filaments; spun-bond, hydroentangled and melt-blown nonwoven fabrics; apertured extruded polymeric films; knitted fabrics; nonwoven netting materials or mesh fabrics; and woven fabric strips.

32. A papermaker's fabric as claimed in claim 22 wherein said bottom layer of said laminated structure comprises at least two distinct sublayers, each of said sublayers comprising one of the materials selected from the group consisting of: staple fiber material; fabric woven from fibers

or filaments; spun-bond, hydroentangled and melt-blown nonwoven fabrics; apertured extruded polymeric films; knitted fabrics; nonwoven netting materials or mesh fabrics; and woven fabric strips.